

## ALL FIBER AUTOCORRELATOR

### Abstract

An autocorrelator apparatus and method for economically  
5 measuring physical properties of an object where the measurement  
path is at least semi-translucent to light, such as thicknesses  
in multilayered optical structures, group index of refraction,  
and distance to a surface. The apparatus includes a non-  
coherent light fiber interferometer and an optional coherent  
10 light fiber interferometer in association so as to share PZT  
fiber modulators. Thickness and boundary extent measurements  
can be made, for example, of solids, liquids, liquids moving  
along a horizontal plane, or liquids flowing down a plane.

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